Approach Spacing Applications Issues Document

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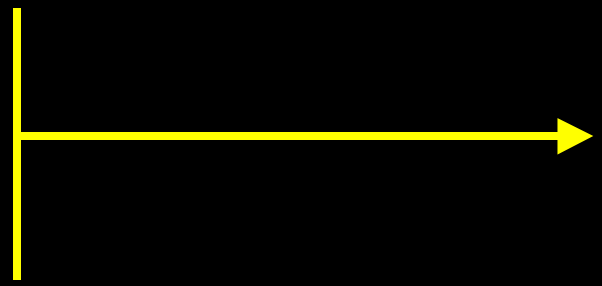
Rationale

- Purpose
  - Capture
  - Describe
  - Monitor



- Intended use by individuals involved in
  - Further development of concepts
  - Technical development of necessary tools
  - Managing activities associated with demos and evaluations

Outline

1 Introduction / Background
- 1.1 Purpose & scope
- 1.2 Acronyms
- 1.3 Definitions

2 Procedure
- 2.1 General
- 2.2 Applicability

3 Flight Deck
- 3.1 Avionics / Human interface
- 3.2 Flight crew procedures
- 3.3 Training

4 Air Traffic Control
- 4.1 Controller Procedures

5 Equipment Technical Requirements
- 5.1 Communications
- 5.2 Navigation
- 5.3 Surveillance
- 5.4 Collision Avoidance

Mixed equipage

Alerts

Procedure set-up

New phraseology

TIS-B compatibility

Alerts for
Approach Spacing (For Visual Approach)

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Overview

- Potential Spacing Evolution
- Alert Issues
- Types of alerts
- Alert Requirements for Visual Approach
- Open Alert Issues for Visual Approach
- Future Alert Issues

Potential Spacing Evolution

Weather	VMC			IMC	
Spacing issuance	Guidance	Requirement		Requirement	
Spacing standard		> Radar Sep	< Radar Sep	> Radar Sep	< Radar Sep
System version	1	2	3	4	5

Alert Issues

- Are any alerts necessary?
- What alerts are necessary?
- Does the alerting level depend on the procedure?

Types of Alerts

- Operational (spacing distance x + y boundary)
  - Potential spacing infringement
  - Actual spacing infringement
- Collision avoidance
  - Traffic to follow
  - Other traffic
- Surveillance (degraded performance)

Alert Requirements

Approach Spacing (For Visual Approach)

Operational Alert	Visual	Yes → Both forward and aft ?
	Auditory	No
Collision avoidance protection on traffic to follow		No * → But… Leave TCAS as is
Collision avoidance protection on other traffic		No * → But… Leave TCAS as is
Surveillance Alert		Yes

Open Alert Issues

Approach Spacing (For Visual Approach)

- Need operational alerts for both forward and aft boundary?
- Agreement on NO requirement for additional collision avoidance
- Agreement on requirement for Surveillance Alert
- Other alerts needed?

Future Alert Issues

- Is a wake bracket & warning needed?
- What alerts are required for the IMC procedures?